

REMARKS

Entry of the foregoing, and further and favorable reconsideration, in light of the foregoing amendments and the following remarks, are respectfully requested.

By the present Amendment, Claims 50, 80 and 81 have been amended to recite "all of said binding partners". No new matter has been added by the above amendments.

The Examiner rejected Claims 50, 80 and 81 under 35 U.S.C. §112, second paragraph, because it was allegedly unclear whether the second reference to "binding partners" referred back to the first reference thereof, and that it was allegedly unclear whether Applicants meant to that "all" binding partners in the system were selected from the recited group. By the present amendment, these claims have been amended to recite "all of said binding partners." It is believed that this amendment should address the Examiner's concerns. Withdrawal of this rejection is therefore respectfully requested.

The Examiner rejected Claims 50-52, 54, 60-61 and 66-74 under 35 U.S.C. §102(a) as allegedly being anticipated by Mitteregger et al. This rejection is respectfully traversed.

The present invention is an extracorporeal system for reducing the amount of a targeted immune system inhibitor in blood, including a) an absorbent matrix comprising an inert medium attached to at least one binding partner capable of specifically binding to a targeted immune system inhibitor; and b) a conduit for conducting the blood to the absorbent matrix to produce altered blood having a reduced amount of the targeted immune system inhibitor, wherein all of the binding partners in the extracorporeal system are selected from the group consisting of

binding partners to: soluble receptors for tumor necrosis factor α and β , interleukin-1 receptor antagonist, soluble receptors for interleukin-1, and soluble receptors for interleukin-6. It is the soluble receptors to cytokines such as TNF- α and β which inhibit the immune response, and thus by removing those soluble receptors, the immune response is stimulated.

In contrast, Mitteregger uses immobilized polyclonal antibodies reactive with TNF- α itself – not the soluble receptor thereto. TNF- α is an “immune system stimulator”, not an “immune system inhibitor” as recited in the present claims. The reasons for Mitteregger’s removing TNF- α are thus completely the opposite of the reasons for removing soluble TNF- α and β soluble receptors as recited in the present claims. Using an adsorbent to remove TNF- α , as was done by Mitteregger, is intended to diminish immune responsiveness to treat conditions wherein the pathology results from too much immune system activity. With the present invention, the method is removing inhibitors of TNF- α and β (soluble TNF- α and β receptors) to increase the level of immune system activity to treat conditions where the immune response to a pathologic agent is not adequate to facilitate the elimination of that agent. As such, Mitteregger does not disclose the invention as claimed, as suggested by the Examiner. Withdrawal of this rejection is therefore respectfully requested.

The Examiner rejected Claims 62-65 under 35 U.S.C. §103(b) as allegedly being unpatentable over Mitteregger et al in view of Skurkovich et al 5,626,843. This rejection is respectfully traversed.

As discussed above, Mitteregger uses immobilized polyclonal antibodies reactive with TNF- α itself – not the soluble receptor thereto. TNF- α is an “immune

system stimulator", not an "immune system inhibitor" as recited in the present claims. As such, Mitteregger does not disclose the invention as claimed, as suggested by the Examiner.

Skurkovich 5,626,843 does not rectify the deficiencies of Mitteregger.
Withdrawal of this rejection is therefore respectfully requested.

The Examiner rejected Claims 50, 80, 81 and 83-86 under 35 U.S.C. §103(b) as allegedly being unpatentable over Mitteregger et al in view of Skurkovich et al 4,362,155. This rejection is respectfully traversed.

As discussed above, Mitteregger uses immobilized polyclonal antibodies reactive with TNF- α itself – not the soluble receptor thereto. TNF- α is an "immune system stimulator", not an "immune system inhibitor" as recited in the present claims. As such, Mitteregger does not disclose the invention as claimed, as suggested by the Examiner.

Skurkovich 4,362,155 does not rectify the deficiencies of Mitteregger.
Withdrawal of this rejection is therefore respectfully requested.

The Examiner rejected Claims 53, 55-57 and 59 under 35 U.S.C. §103(b) as allegedly being unpatentable over Mitteregger et al in view of Prusiner 6,221,614. This rejection is respectfully traversed.

As discussed above, Mitteregger uses immobilized polyclonal antibodies reactive with TNF- α itself – not the soluble receptor thereto. TNF- α is an "immune system stimulator", not an "immune system inhibitor" as recited in the present claims. As such, Mitteregger does not disclose the invention as claimed, as suggested by the Examiner.

Prusiner does not rectify the deficiencies of Mitteregger. Withdrawal of this rejection is therefore respectfully requested.

In view of the foregoing, it is believed that the claims are in condition for allowance, and early and favorable action in the form of a notice of allowance is respectfully requested.


In the event that there are any questions relating to this Amendment or to the application in general, it would be appreciated if the Examiner would contact the undersigned attorney by telephone at (202) 373-6000 so that prosecution of the application may be expedited.

The undersigned hereby authorizes the Patent Office to charge any necessary fees, which may be required by the filing of this paper, or credit any overpayment to Deposit Account No. 50-2518.

Respectfully submitted,
BINGHAM MCCUTCHEN, LLP

Date: March 28, 2006

By:

 Reg. No. 51,147 for:
Sharon E. Crane, Ph.D.
Registration No. 36,113

Bingham McCutchen LLP
Three Embarcadero Center
San Francisco, California 94111-4067
Local Telephone: (202) 373-6000
Local Facsimile: (202) 373-6001